

# Provost provides updates on College of Computing plans

*Sites along Vassar Street emphasized for new building*

By Jessica Shi  
NEWS EDITOR

Provost Martin Schmidt PhD '88 provided an update on the planning process for the Schwarzman College of Computing at the faculty meeting Wednesday.

Schmidt said he expected that the search committee for the college's inaugural dean, which is chaired by Institute Professor Ronald Rivest, would provide a list of candidates this week. A number of candidates on the list will then be selected for an interview.

Several viable sites for the new building, which has an anticipated completion date of 2022, have also been identified and presented to the Academic Council and some members of the faculty Committee on Campus Planning, Schmidt continued.

Schmidt did not elaborate on specific locations under consideration, instead only mentioning that the sites that have attracted the most attention are those along Vassar Street.

Associate Provost Krystyn Van Vliet PhD '02 added in an email to *The Tech* that this area is "proximal to most of MIT's research and teaching activities."

Van Vliet further clarified that "the region of campus appears clear whereas the specific site remains under discussion," and declined to share potential sites, claiming that this can be "confusing and alarming" if done prematurely.

As for whether the construction would happen on an empty site or involve the tearing down of an existing building, Van Vliet wrote, "Few sites on the current MIT campus are truly empty, given our decades of growth and change, and thus the siting of the new college will certainly include reconfiguration if not removal of an existing building on that site."

The bulk of Schmidt's update focused on outlining the five working groups that are currently tasked with developing ideas and recommendations for the college and its future dean.

One group considers "the organizational structure that enables us to accomplish the mission of the college," Schmidt said. Questions to be answered include whether the college will consist of departments, sections, or other units.

Schmidt commented that it is "likely that it makes sense" to have

a department of electrical engineering within the college.

A second working group addresses faculty appointments, especially regarding the "bridge" faculty who will hold joint appointments across departments.

Schmidt said the group will look at what has and has not worked with faculty who currently hold joint appointments, as well as "the various ways faculty already on this campus ... might participate in the college."

The college expects to hire 50 new faculty, including 25 bridge faculty, over the course of approximately five years, according to the FAQ published by MIT News.

Another group focuses on degrees, particularly dual degree programs, and courses, particularly courses that are developed within the college but are broader ranging.

Schmidt said that historically, it has taken about a year to develop each existing dual degree program, and he estimated that there are at least 25 units at MIT that would be interested in creating new ones.

The emphasis here is "not faster, but more," Schmidt said — that is,

Computing, Page 2



ASSEL ISMOLDAYEVA—THE TECH

A team works on final preparations for their project before the start of the MIT Museum's Friday After Thanksgiving Chain Reaction event in Rockwell Cage Nov. 23.

## Chinese scientist claims recent birth of first gene-edited babies

*CRISPR co-inventor Feng Zhang calls for moratorium*

By Jordan Harrod  
STAFF REPORTER

On Sunday, Chinese scientists at the Southern University of Science and Technology announced via YouTube that the first pair of gene-edited babies had been born.

Led by He Jiankui, the team of researchers had recruited couples for a study where CRISPR-Cas9 was used to eliminate a gene called CCR5 in human embryos before implanting them into women using in vitro fertilization (IVF). CCR5 codes for a receptor used by the HIV, smallpox, and cholera viruses to infect host cells. Jiankui hoped that the elimination of this gene would result in

resistance to these viruses in the children.

In the video, Jiankui announced that one of the couples had successfully become pregnant, and had given birth to twin girls earlier this month. He declined to identify the couple or the region in which they reside, and the success of this study has not been independently confirmed. The study was carried out secretly, with the *MIT Technology Review* and The Associated Press breaking the news this past Sunday.

This announcement prompted significant backlash from the global scientific community, especially in light of the fact that it was released hours before a global gene-

editing summit in Hong Kong that aimed to discuss how such technologies would be governed. Many scientists condemned Jiankui's work, calling it unnecessary, given current preventative measures for HIV, smallpox, and cholera, and reckless, as gene-editing can cause off-target effects that are difficult to predict and have significant developmental consequences.

Researchers at the Broad Institute released statements on Monday in opposition to Jiankui's work. Feng Zhang, a molecular biologist who pioneered the usage of CRISPR in eukaryotic cells, noted, "Although

CRISPR, Page 2

## Individual who suffered medical emergency Mon. in Infinite has died

The person who suffered a medical emergency in the Infinite Corridor on Monday has died, Kimberly Allen, director of media relations, confirmed in an email to *The Tech* Wednesday.

"MIT Police and paramedics with the Cambridge Fire Department responded to reports of an individual in need of medical attention in the Infinite Corridor. The individual, who was on campus as a subcontractor, was transported by ambulance to a hospital where, police have learned, he later died," Allen wrote.

*The Tech* observed that the area of the Infinite near Building 8 was blocked off at around noontime Monday for about an hour.

Bryan Padilla '22 wrote in an

email to *The Tech* that he came across the individual lying in the hallway and stopped to try and help, along with a few others.

"I asked the gentleman how he felt and he just said 'dizzy,'" Padilla wrote. When his condition worsened, Padilla asked someone to call 911.

Allen listed resources available to those seeking comfort or guidance, including MIT Mental Health and Counseling, Student Support Services, Graduate Personal Support, the Graduate Assistance and Information Network, MyLife Service (for faculty, staff, and postdocs), Dean on Call, and the Office of Religious, Spiritual, and Ethical Life.

— Jessica Shi

### BETTER BATTERIES

The Electrochemical Materials Lab hopes to optimize energy storage using materials science. **SCIENCE, p. 5**

### WOULD YOU EAT THAT?

Weird food combinations. **CAMPUS LIFE, p. 4**

### YOUR NARCISSISTIC AUNT

Auntie Matter talks about herself. **CAMPUS LIFE, p. 4**



### OUTCASTS STICK TOGETHER

A heart-wrenching film about shoplifting and family. **ARTS, p. 7**

### TOD MACHOVER TALKS SCHOENBERG

MIT Media Lab professor composing for an opera. **ARTS, p. 8**

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# Students share thoughts, concerns on new College of Computing

*Some note that no additional information has been actively shared with students since initial Oct. 15 announcement*

By Joanne Yuan  
STAFF REPORTER

The new Schwarzman College of Computing, which is expected to open in September 2019, has elicited mixed reactions from students, who recognize its potential to expand computing opportunities while also noting the lack of detailed information that has been released since the original announcement.

At the student forum on the College of Computing held Oct. 25, several audience members raised questions regarding how the college will approach diversity, and MIT's mission and relationship

with donors. According to MIT News, the administrators at the forum responded with agreement with regards to diversity, and stated that MIT had practiced "due diligence" during the creation of the college's name.

Thomas Sierra '22, who plans to study Course 3, said in an interview with *The Tech* that he believes that the college will help fulfill the demand for computer science majors in the workforce.

Aaditya Singh '21 similarly told *The Tech* that the college is valuable because "in the future, there's going to be a much more computational presence in all applications."

As a Course 6 and Course 9 student, Singh said that he noticed the prevalence of computer science in his neuroscience classes, which require the use of MATLAB and involve time series analysis for neural recordings.

"I'm excited to see what things it leads to and what discoveries are made by researchers in the college of computing," Singh said.

Many details about the implementation have not yet been announced, but both Singh and Sierra said that they are excited about the interdisciplinary aspects; Sierra is particularly interested in combining computer science with his inter-

est in material science.

Munachimso Nwana '22 told *The Tech* that he believes that the college may be valuable to the numerous Course 6 majors in MIT, however, he said he does not foresee it having a significant effect on his own plans to study business analytics.

However, Nwana also commented on the lack of specific information available, stating that he had not received additional information since the Oct. 15 email from President L. Rafael Reif announcing the creation of the college. Emma K. Batson '22 concurred, commenting, "I don't think anyone knows

any of the details of this," in an interview with *The Tech*.

Batson does, however, support the sentiment behind the initiative: "I think that all majors should have more opportunities to learn about how to take these new tools and problem-solving skills into their own majors. And that's what I'm hoping the new College of Computing will do." Batson also hopes that the changes will make administration for Course 6 easier.

"In general, I think it's the right move; specifically, whether or not it's the right move, [I have] yet to say. That depends on implementation details," Batson concluded.

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from new\_skills import \*  
  
def learnMarketableJobSkills():  
 return linux, OSX, javascript, applescript, perl, python, PHP  
  
if self.interest == True:  
 print "E-mail join@tech.mit.edu"


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Solution to Eagles  
from page 9

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Solution to Duos  
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Solution to Sixers  
from page 9

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Solution to Flyers  
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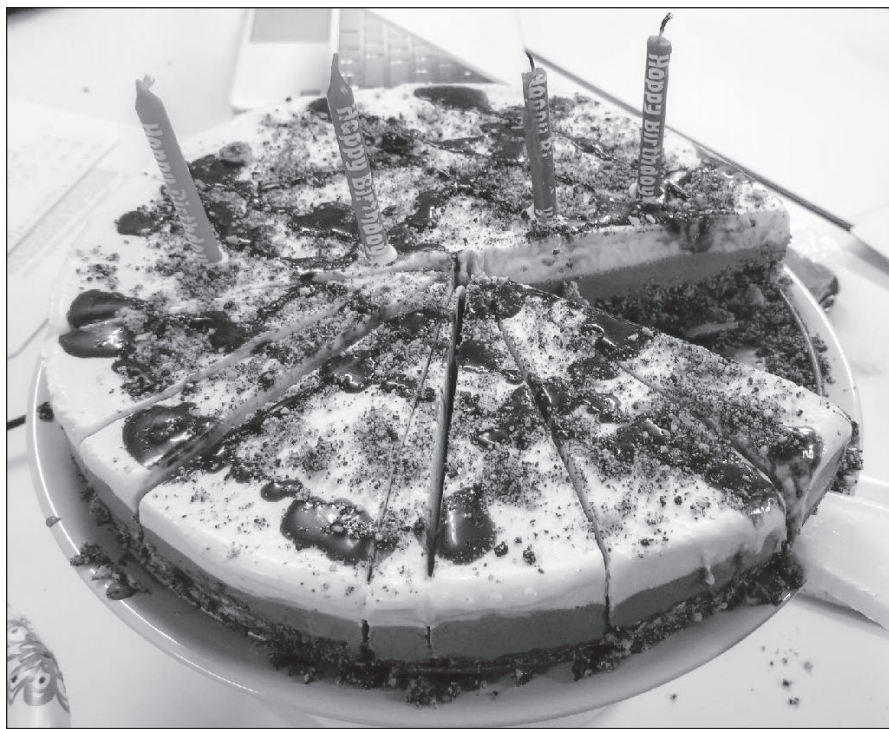
# Who says pasta and ketchup don't go together?

Sometimes, a poor college student just has to put the things in their cupboard together. Other times, you realize you just had a weird childhood.

1. Green beans on buttered toast. I got this from a senior on my floor. Simple, quick, and surprisingly satisfying.
2. Peanut butter, sliced bananas, and Hershey's sauce on a bagel/rice cake/toast. In theory, the flavor combination is fine. My roommate just thinks I use Hershey's syrup too much (as evidenced by the Hershey's drizzle on the ice cream cake I made for my birthday, and the next number in this list...).
3. Using Hershey's syrup in s'mores. My roommate may have a point, but actual chocolate is expensive. As long as you have the cracker/marshmallow/chocolate flavor combo, what's the issue?
4. Peanut butter and jelly bagel. I think this is totally normal, but Southerners have looked at me in disgust a few times. Apparently, anything other than cream cheese is blasphemy.
5. Peach froyo with bursting mango boba. Wasn't bad...but the question is, was

it good? Courtesy of Cafe 472 (well, I bought it from them. Not sponsored.)

6. Pizza sauce on toast. I feel like pizza bagsels are acceptable, but I didn't have a bagel...What's one carb for another?
7. Warm milk in cereal. So this is definitely a British thing, made popular (I think) by Coco Pops (basically chocolate Rice Krispies) advertisers. At least, I remember seeing it in TV adverts when I was younger. The perfect solution for when someone says they don't want cereal because they want "a hot breakfast."
8. Pasta with ketchup. My brothers and I add tomato ketchup on top of our pasta, and this is a totally normal thing within our family. This is after my mum has cooked it with the normal sauce and veggies. Especially after reheating, when the pasta has become a bit dry, it's a perfect rejuvenation technique. Thoughts?
9. Chicken and waffles. Apparently this is widely accepted in America, but as a foreigner, it's pretty gross. I can accept fried chicken on a savoury waffle, but topped with maple syrup and icing sugar? What is it with maple syrup on savoury things? I don't appreciate my baked beans being sweet!



TAFSIA SHIKDAR

**The (vegan) ice cream cake** I made for my birthday last year. I think the Hershey's drizzle was a perfect addition.

## ADVICE

## Auntie Matter on herself

**By Auntie Matter**

If you have questions for Auntie Matter, please submit them at [tinyurl.com/AskAuntieMatter](https://tinyurl.com/AskAuntieMatter).

Auntie's readers have long expressed to her that they would like to know more about the mysterious entity behind everyone's favorite weekly sage advice column. Therefore, Auntie will indulge her more narcissistic tendencies. You're welcome, readers.

If you would like Auntie to return to actually giving advice, please submit more questions! Otherwise, expect a full column next week of Auntie's favorite recipes, including her favorite six-ingredient Swedish chocolate cake. She recommends browning the butter before adding it to the batter, even though this recipe does not call for this.

*Dear Auntie Matter,*

*If you could relive your years as an undergrad at MIT, what would you do differently?*  
— A Curious Reader

Dear Curious,

Given the chance to go back in time, there are things Auntie wouldn't repeat, but she doesn't exactly regret any of her decisions. There is nothing (except for working at a certain summer program

which will remain nameless) that Auntie feels was simply the wrong decision. She could not have learned from her mistakes without making them, and it's not clear that erasing them would be the best course of action.

That said, there are a few things she wishes she knew as a freshman:

- Do not write in pen in your copies of philosophical works. Senior you will not find freshman you's commentary very enlightening.
- You do not need to work the whole summer — if you are travelling for pleasure, spend as long as you can there, even and especially if it means taking an extra week off of your summer internship. IT REALLY DOESN'T MATTER.
- Attend that 10 a.m. class, or you may have to drop and repeat it. Twice.
- If eye contact is not a challenge for you, UPOP may not be the best use of your time.
- When your summer internship program requires you to write a 20-page policy paper over the summer, you should actually do so during the summer months as opposed to waiting until October when it is due.
- Before you take on a UROP where you have to do brain surgery on rodents

and/or kill them in ways that are almost comically gruesome, meditate on your suitability for such a job. Furthermore, investigate the social climate of any workplace you are considering joining — you may be (unpleasantly) surprised.

- Very high standards are appropriate in dating.
- If you struggle to eat enough, full-fat dairy is your friend. Perhaps even if you do not have this problem, full-fat dairy is your friend. It tastes better. There, Auntie said it.

*Lightning round: now Auntie will answer a few short questions about herself.*

What are your favorite Central Square restaurants?

Auntie's two top picks are Asmara, an Eritrean and Ethiopian restaurant, and the Rangzen Tibetan Place (especially the lunch buffet). She recommends the vegetarian combination for two at Asmara and the veggie momo at Rangzen.

*What are your dating deal-breakers?*

Dreadlocks on white men, people who talk about Marvel movies for the entire first date, people who are too clingy, people who are not clingy enough, people who say they “don’t read,” rationalists, picky eaters, anti-GMO sentiment,

cigarette addiction, and patchy facial hair (just shave!).

*What do you look for in a friend?*

“Complete friendship is the friendship of those who are good and alike in point of virtue, ... yet friendships of this sort are likely to be rare, since people of this sort are few” (Aristotle, *Nicomachean Ethics*, VIII.3.7-26, trans. Bartlett & Collins).

What is your favorite reality television show?

Auntie is so glad you asked this question! She is an avid viewer of MTV's *16 and Pregnant*. Auntie has learned so much from the show: it reminds her each episode what an epidural is, what pitocin is, and confirms to her that she was sensible in getting an IUD. No pregnancy scares for Auntie! It also taught her this sage lesson: those least qualified to be teen parents are the most likely to become teen parents.

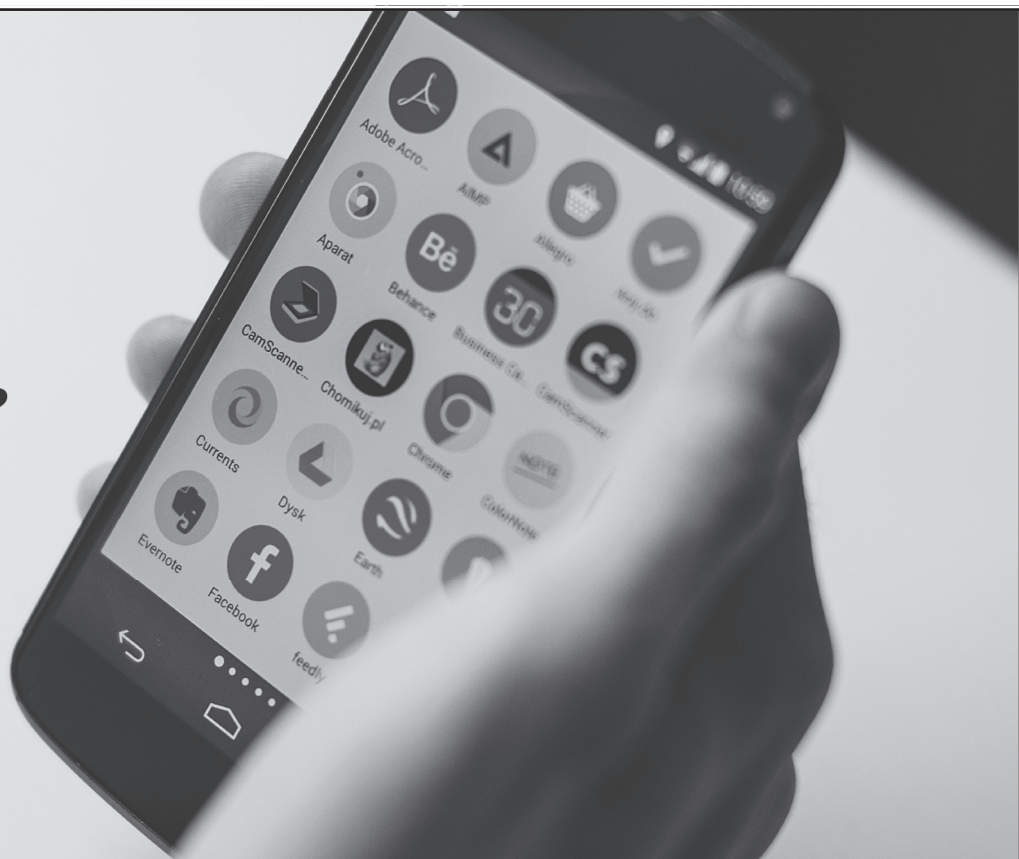
*What do you look for in a vacation spot?*

Infinite delicious Turkish breakfast, pleasant ferry rides on the Bosphorus, friendly locals who offer to drink tea with you, weekend trips to Ephesus (look for Ali, the shoe merchant, in the nearby town of Selçuk), cheap fresh-squeezed orange juice, and beautiful Islamic architecture. Auntie also enjoys visiting places that aren't Turkey.

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## LAB SPOTLIGHT

# The next generation of materials

*The Electrochemical Materials Lab aims to develop the multifunctional materials of the future*

**By Jordan Harrod**  
*STAFF WRITER*

Scientists and industry leaders alike have hypothesized that we are reaching the limits of our ability to design faster computational systems using traditional hardware like transistors. While quantum computing is a tantalizing solution to this problem, the technology is not yet ready for the hands and pockets of the average consumer. Jennifer Rupp, Professor of Materials Science, Electrical Engineering, and Computer Science and Principal Investigator of the Electrochemical Materials Lab, is working to develop new materials that bridge this technology gap for the average person. The Electrochemical Materials Lab focuses on finding new ways to process ceramic and glass, leveraging new methods and design paradigms towards new device functionalities that have the potential to make our devices smaller, faster, and smarter than ever before.

When Rupp was 17, she found herself extremely interested in how atoms and chemistry create crystal structures. Classically trained in mineralogy and crystallography, she was “always very amazed” by the “high variety of properties defined by crystal structures,” and gravitated towards materials. “It was a natural given to go into ceramic processing and properties of materials, and thinking about what that can define for the next era of devices,” she recalled. As Rupp focused increasingly on ceramics and device engineering, she began looking for ways to develop more efficient batteries and the next generation of computational

devices. To this end, she joined MIT and established the Electrochemical Materials Lab.

What makes the batteries developed in the Electrochemical Materials Lab different from the ones in our phones and laptops? According to Rupp, it's the flammability of the material. "If you opened your battery, it would flame, or cause irreparable damage. But if you have the lithium encapsulated in a ceramic structure, even if you open the battery casing, it will not enflame." In other words, ceramic structures would make batteries much safer for the average consumer. Rupp also notes that ceramic's durability would allow batteries to run at higher voltages that would corrode conventional laptop and phone batteries. "Using these higher voltages would allow devices to be charged faster and potentially store more energy, extending the lifespan of consumer electronics."

**Ceramic structures would make batteries much safer for the average consumer.**

In addition to increasing the voltage at which batteries can run, Rupp is also interested in expanding the functionality of batteries towards sensing technology. “Currently, in your phone, you have your battery that supplies the energy, a couple of sensors that track your motion, temperature, and a couple other things, and a couple of processors computing the data,” Rupp explained.

"What I'm also working on is having one base material for the hardware with different electrochemistries for energy storage, environmental monitoring, and data computation." In this way, Rupp hopes to optimize the amount of materials used in phones and laptops while also increasing function.

**Scaling the processing and manufacturing of a material to maintain its useful properties can be a challenge.**

The lab has already made strides towards developing batteries with environmental sensors. They recently published a paper in *Nature Materials* showing the use of a solid state battery, which is a fast conductor, to track the carbon dioxide levels in a room in real-time at very low temperatures. This sensor-battery hybrid can be used to determine the number of people in a given area, potentially feeding into a climate control system that would result in efficient energy usage and real-time temperature control in any space. While the battery only senses carbon dioxide at the moment, the lab is has begun research on expanding this technology towards sensing other relevant chemicals.

Though progress has been made, the work of the Electrochemical Materials Lab is not without challenges, especially when looking to preserve a material's properties after processing it to create a product. Ac-

cording to Rupp, "Process defines properties." The lab often discovers or knows of exciting properties of materials that have the potential to be used for novel devices, but scaling the processing and manufacturing of that material in a way that maintains those properties can be a challenge. Rupp welcomes this challenge. She believes that scientists, in addition to doing basic research, should make an effort to understand how their work can be made accessible to society. "When I started at MIT, I think I was doing more conceptual and fundamental work, and I think MIT gave me the wings to be courageous, to think about how we can translate our work back to the public." In pursuit of this, Rupp and her students make ethically conscious decisions about the research partnerships that they choose to enter, being sure to foster collaborations that will make their work accessible to the greater public.

In addition to bringing her own research to the public, Rupp is interested in showing other academics that they do not need to work solely within their own field. She wants to foster interdisciplinary research on electrochemical materials development to increase the potential uses for a given device. Rupp also wants to make mass energy storage cheap and accessible, so that a broader mass of people can access resources such as electric cars. In Rupp's eyes, the future of electrochemical materials is "challenging, exciting, and good." By working to make accessible, efficient technology, the Electrochemical Materials Lab hopes to brighten the future of energy for the average person.

# Say Hello

# To My Little Friend.

*photo@tech.mit.edu*







## MOVIE REVIEW

# The wronged Maria Callas

## Maria Callas defends her reputation in new documentary

**By Ethan Vo**

ASSOCIATE ARTS EDITOR

*Maria by Callas* is an ambitious documentary in which its guiding principle acts as a double-edged sword. Aiming to debunk accusations against the late soprano of being a tempestuous diva, director Tom Volf attempts to create a narrative of the life of Maria Callas by only using sources which contain her or were created by her. These materials, some never-before-seen, include archival recordings of Callas's operatic per-



COURTESY OF SONY PICTURES CLASSICS

**A new documentary** about Maria Callas aims to use only her own words.

performances, press interviews, unpublished letters written by Callas, and footage from the press and paparazzi. While *Maria by Callas* is successful in revealing Callas's grace and intelligence, the film's meandering direction left me wanting for a more traditional approach towards documentaries.

The documentary progresses chronologically through Callas's life with narration of Callas's letters by Joyce DiDonato, an acclaimed operatic mezzo-soprano. Most of the major events in her life are covered, including the Rome Cancellation — in which

Callas cancelled mid-performance due to contraction of bronchitis, Callas's legal separation from her husband, and Callas's affair with shipping magnate Aristotle Onassis. The overarching theme of the film is Callas's view of her identity, which she viewed as split between the ordinary "Maria," who yearns to give up her career and become a housewife, and the celebrated "Callas," the artist who accepts the events in her life as destiny.

Arias performed by Callas are interspersed throughout the film either as incidental music or presented in full, which are connected to Callas's emotional state in the milestones of her life. For example, the highlight of the film is a colorized version of her famed "Casta Diva" from *Norma*, in which her plea to the Goddess for Peace extends to the public outrage caused by the Rome Cancellation. "L'amour est un oiseau rebelle" from *Carmen* and "Vissi d'arte, Vissi d'amore" from *Tosca* similarly appear in full as reflections of her romance with Onassis as "Maria" amidst her dedication to singing as "Callas." For these reasons, the portrayal of Callas's life is insightful and thematically strong.

Unfortunately, the imposed restriction to material from Callas's life stifles this narrative by creating a plodding pace and obscuring the film's message. Due to the lack of overarching narration, the film presents Callas's arias with little introduction, initially causing confusion as to why the film moves into song. This is also an ultimate halt in the narrative, since Callas's performances are showstoppers. The film improves in its rhythm later, but the film has already wandered through enough events, robbing Callas of agency and ascribing them to the destiny in which Callas believed.

★★★★★

# Maria by Callas

**Directed by Tom Volf**

**Screenplay by Tom Volf**

**Starring Maria Callas,  
Joyce DiDonato**

What truly makes the pacing issues in *Maria by Callas* detrimental is the choice of footage in the first half of the film. Interspersed between the chronological events is David Frost's interview with Callas, which is letterboxed and in black and white. Since I was viewing the film in a typical cinema setting, the switching of resolution and colors was disorienting due to the size of the screen. The paparazzi footage, which was already uncomfortably invasive rather than intimate, became nauseating during the section detailing Callas's legal separation from her husband. These effects exacerbated the pacing issues and made the film tiresome.

*Maria by Callas* certainly provides an intelligent look into the singer's life with an interesting restriction. However, since almost the entire documentary is comprised of footage from over 40 years ago, much of which is already publicly available, it is reminiscent of a book report which merely quotes and summarizes the best parts; one wonders whether the merits of the organization of the report outweighs reading the book itself. In light of the presentation issues, I would rather stick to the source.

## MOVIE REVIEW

# A family bound not by blood, but shoplifting, steals your heart

Critically-acclaimed film uncovers the struggles of a damaged and forgotten Japanese family

**By Alana Chandler**

*STAFF WRITER*

Fatherly businessmen are uniformly packed into train cars like sardines, mothers carefully place chopsticks next to a steaming dinner days on repeat, and students in crisp navy uniforms bow at right angles as the starting school chime rings. Japanese society is defined by homogeneous organization. But beneath a shell of structure pulses a harsh underworld of oppression, overwork, and exploitation. *Shoplifters*, a film directed by Kore-eda Hirokazu, poignantly uncovers the struggles of an oddball group of people who consider one another family, despite lacking biological relation — a son and a daughter picked off the street, a mother and a father married by crime. Acting as an ensemble piece, the film takes an intimate look into the perspective of each character.

"Husband," "wife," "grandmother," and "children" all live together in a crumbling shack-of-a-house, barely getting by on the meager salary of father-like Osamu's construction work and motherly Nobuyo's laundry job. As the title of the movie sug-

gests, the family thrives off daily shoplifting expeditions, whether it be Osamu and makeshift son Shota's teamwork at the supermarket or Nobuyo's sneakish pocketing of items from the clothes she cleans. After a successful shoplifting mission, Osamu and boyish Shota spot a young girl, perhaps four years old, sitting alone and cold in an empty house. Noticing the scars and bruises lining her arms and the misery in her empty stare, they bring her home; soon, the young girl, Juri, is a part of their family.

Despite the littered nature of their small home, their life appears idyllic, brimming with loving moments — slurping a feast of instant ramen noodles together, splashing in the waves on a weekend beach trip, listening to fireworks they cannot see... In their cluttered but comfortable abode, they trip over one another with tenderness, laughter reverberating off the narrow walls.

Almost too good to be true, this charm begins to crumble when Shota develops concerns over the morals of shoplifting.

Soon, the dark secrets of the family are revealed. From the teenage daughter Aki's soft-porn sex work to the grandmother's addiction to pachinko machine gambling, the impoverished innocence of each character begins to shatter. Although the audience is watching a family comprised of what society considers the bottom of the barrel — those who leech off others without contributing anything — the audience cannot help but cheer them on through their struggles. Juri's childhood neglect and domestic abuse, the harsh working conditions experienced by the parents, and the sexual exploitation of young girls are some examples of nuanced details that bring to life issues often overlooked in Japan.

This family acts as a microcosm of society; from the surface, they appear to live a structured life, yet behind the curtains lays the tale of damaged outcasts. When the family takes Juri into their home, is it an act



COURTESY OF MAGNOLIA PICTURES

**Nobuyo (Ando Sakura), Juri (Sasaki Miyu), and Osamu (Lily Franky)** play together in *Shoplifters*.

of abduction or salvation? By not following the rules of an organized society, are they the ones who have wronged, or rather, are they the marginalized victims of a wronged system? Who has truly been “shoplifted”?

The typical American audience might need patience to sit through the measured film, but for those who do, they will be re-

warded with a tale that is heart-wrenching and raw. Beautiful cinematography and natural performances by famed actors paint a masterpiece made up of delicate, brushstroke details, from moments to looks and soft touches to smiles. *Shoplifters*, unlike its titular connotation, is a film of compassion.

★★★★☆

## Shoplifters (Manabiki Kazoku)

**Directed by Kore-eda Hirokazu**

**Starring Lily Franky, Ando Sakura, Matsuoka Mayu, Kiki Kirin**

## Now Playing







# Eagles

Solution, page 3

	9	4			7	1		
6								
		7		3			4	8
1	2	3		6		4		
			5		3			
		5		1		8	9	3
5	7			4		2		
								4
		8	1			3	6	

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

# Sixers

Solution, page 3

					5	8		
	2				8			
9			6		2		4	5
1	9	6		8			2	
8								1
	7			9		6	8	3
4	5		7		3			8
			8				1	
		7	1					

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

## Detailed Duos

Solution, page 3

### ACROSS

- 1 Where props are displayed
- 5 Sound in a stable
- 10 Spring time
- 13 Fun-run pace
- 14 Debussy's sea piece
- 15 Confront
- 16 Sort of solo
- 17 Preposterous
- 18 Former spouses
- 19 Paragon of virtue
- 22 Borden's cow
- 23 Kept on course
- 27 Actress Woodard
- 31 Unseen attraction
- 32 "Thursday Night" game grp.
- 35 USDA diagram
- 38 Eventful periods
- 40 Flap in one's yap
- 41 Refrain snippet
- 42 Olympian ambition
- 45 FDR's domain circa 1931
- 46 One making introductions
- 47 Redmayne who was

### DOWN

- 1 Where props are displayed
- 2 Harry Potter series owl
- 3 Labors long
- 4 Ballparks
- 5 Narrow cut
- 6 Family nickname
- 7 Arabian Sea sultanate
- 8 Tears apart
- 9 Pay for everyone
- Hawking
- 49 Throws in the microwave
- 52 Happen next
- 56 Place of ultimate happiness
- 60 Be in sync
- 63 Low-tech hair dryer
- 64 Cruise stop
- 65 Love in Barcelona
- 66 Disney mermaid
- 67 Ankle neighbor
- 68 Came into
- 69 Expects the return of
- 70 Art on arms

- 10 Hit the limit, with "out"
- 11 Old pro
- 12 "By all means"
- 15 The \_\_ City (what Washington called Washington)
- 20 Portraitist's subject, at times
- 21 Bring up
- 24 Caesar subject
- 25 Post of etiquette
- 26 Tots' pops
- 28 Polo team complement
- 29 Wander around
- 30 Draw out
- 32 With less experience
- 33 Wharton title character
- 34 Timber tree
- 36 Trudge along
- 37 Lawn location
- 39 Surprising success
- 43 Highly prized
- 44 Subsided, with "down"
- 48 Get to volunteer
- 50 Final tally

1	2	3	4		5	6	7	8	9		10	11	12
13					14						15		
16					17						18		
19					20					21			
22								23			24	25	26
				27		28	29	30		31			
32	33	34		35				36	37				
38			39		40						41		
42				43						44		45	
46							47			48			
49					50	51				52	53	54	55
				56				57	58	59			
60	61	62			63						64		
65					66						67		
68					69						70		

- 51 Camper's confection
- 53 Obama daughter
- 54 Darkened
- 55 Idyllic locales
- 57 Victor's cry
- 58 Stuff that's sown
- 59 90-degree shapes
- 60 Binge
- 61 "If you ask me," in texts
- 62 Web-crawling software



## [2075] Update Your Address



This is my four-digit PIN. It was passed down to me by my father, and someday I will pass it on to you. Unless we figure out how to update it, but that sounds complicated.



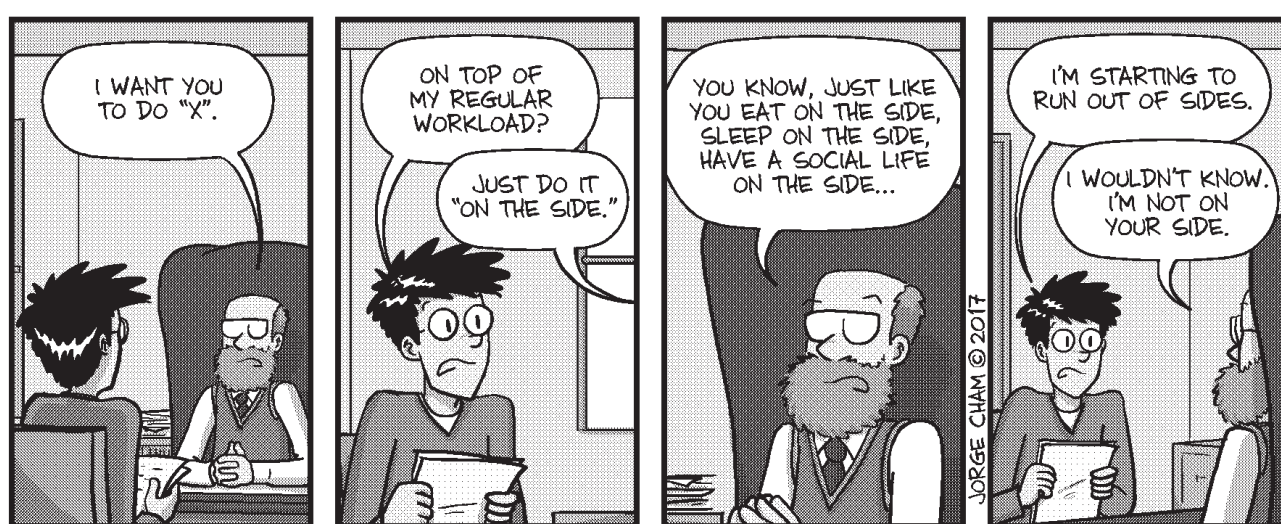
by Ryan North

The comic strip consists of six panels arranged in two rows of three. The top row shows a single dinosaur in each panel, while the bottom row shows two dinosaurs interacting. The dialogue is as follows:

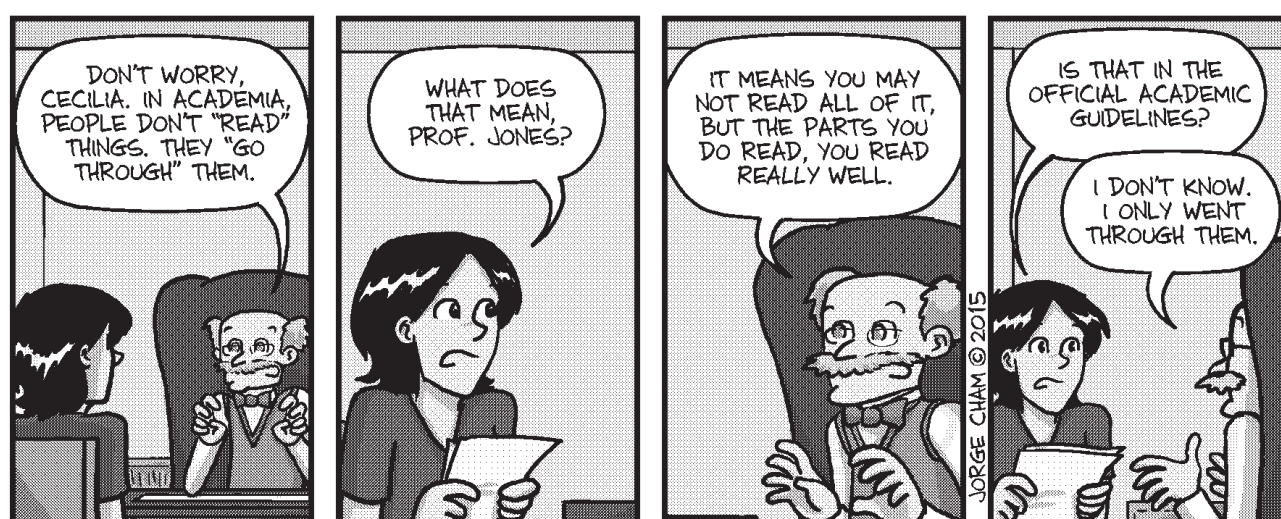
- Panel 1 (Top Left): A dinosaur says, "It's time for the spookiest night of the year..."
- Panel 2 (Top Middle): A dinosaur says, "...HALLOW--"
- Panel 3 (Top Right): A dinosaur says, "Hallowe'en was weeks ago, man."
- Panel 4 (Bottom Left): A dinosaur says, "So there's no treats, just tricks?" and another dinosaur replies, "EXACTLY. You spook unprepared people!!"
- Panel 5 (Bottom Middle): Two dinosaurs are shown. One says, "Feels like jumping out and harassing strangers is pretty indistinguishable from juvenile delinquency." The other replies, "'Pretty indistinguishable'?! Dude, it's clearly EXTREMELY distinguishable! For one, we're ADULTS jumping out of the bushes and scaring people!!"
- Panel 6 (Bottom Right): A dinosaur says, "It's like, legally it's a whole different set of statutes"



by Jorge Cham



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## Solution, page 3

2x		63x		45x		384x	
35+					40x		13+
	6x	432x				15x	7
		28+			4		120x
15+				288x			7x
29+			5x		189x		2
		4x		3		2÷	54x
2			48x		56x		30x
21+				5-			1

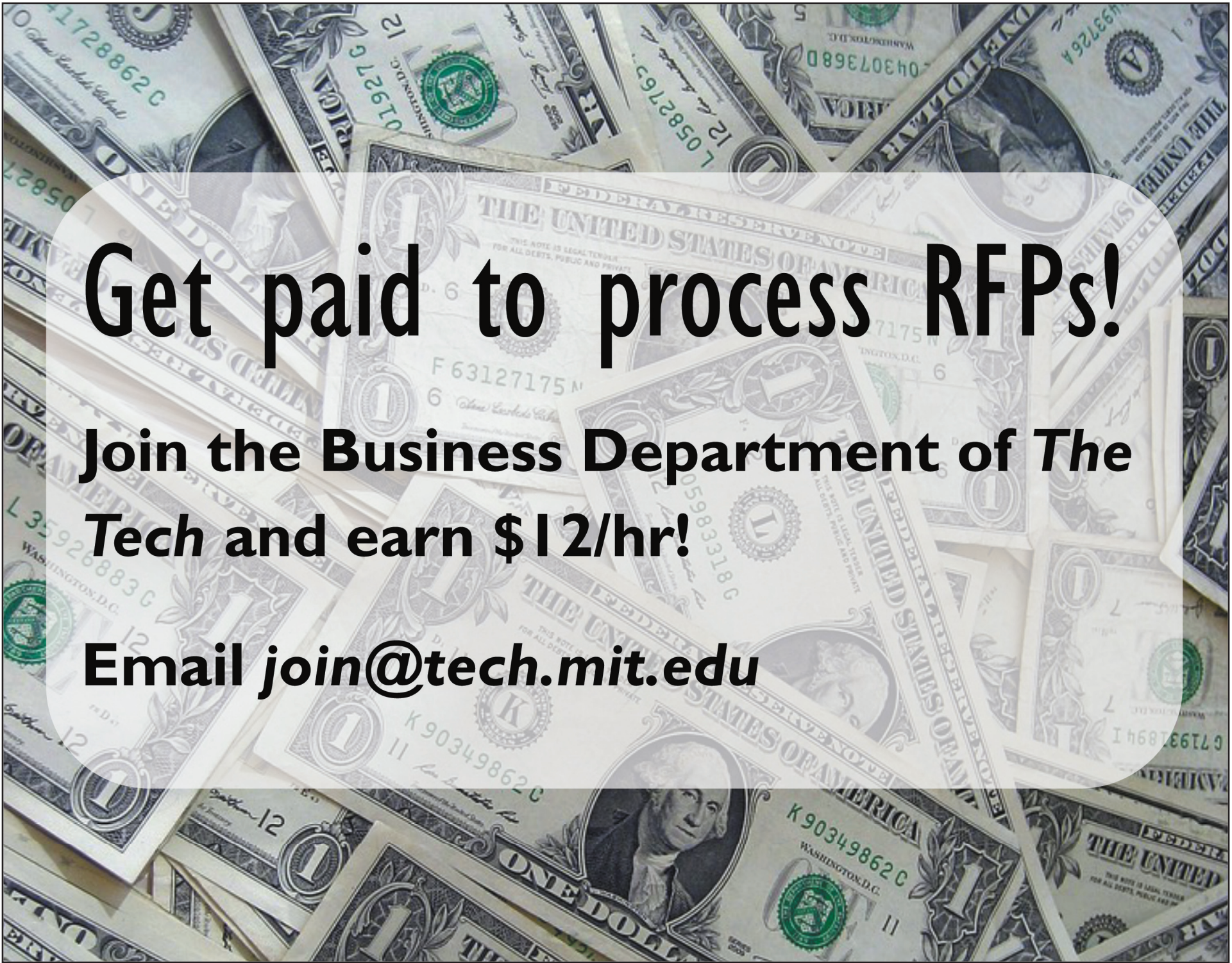
Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–9. Follow the mathematical operations for each box.

Greenhouse Affect

by Mehitabel Glenhaber







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